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EXAMINER

CHANG, JON CARLTON

ART UNIT PAPER NUMBER

2623

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7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,878

Applicant(s)

SENI ET AL.

Examiner

Jon Chang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

Response to Applicants' Amendment and Arguments

1. The amendment filed January 8, 2003, has been entered and made of record.

With respect to the rejection under 35 U.S.C. § 112, ^{Second}~~first~~ paragraph, the amendment to claim 1 corrects two issues raised in the previous Office Action, namely, the indefiniteness of the term "high" in claim 1, and the lack of antecedent basis in claim 28. The amendment did not address the lack of clear antecedent basis of "the predetermined screen area" in line 7 (currently in line 6).

Applicants' arguments have been fully considered, but they are not deemed to be persuasive for at least the following reasons.

On page 19 of the response, Applicants argue that none of the cited references individually or in combination, describe or suggest simultaneously displaying a handwritten input and a plurality of corresponding recognition results. Capps, for example, displays a handwritten input (Fig.6a, item I, which is the ink object version of the word object), which is displayed simultaneously with the recognition results. Beernink teaches the same thing in Fig.5 (note item 172).

The rejections are therefore maintained.

The Examiner notes that the concept of simultaneously displaying a handwritten input along with recognition results is known elsewhere in the art. For example, U.S. Patent 4,972,496 to Sklarew (cited in this Office Action, but not relied upon), teaches this in Fig.11D.

Typographical Error in Previous Office Action

2. The Examiner wishes to point out typographical error in the previous Office Action. At item 6, on page 5 of the previous Office Action, the claims listed should have read, "2, 4, 36-39 and 49-53". This is clear from the text of the rejection.

Claim Rejections - 35 USC § 112

3. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, "the predetermined screen area" at line 6 lacks clear antecedent basis.

Claims not mentioned specifically depend from indefinite antecedent claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 6, 33-35 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,367,453 to Capps et al. (hereinafter "Capps").

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As to claim 1, Capps discloses a hand-held electronic apparatus having a small housing for ease of transport thereof and to contain control circuitry for running different applications therewith (Figs. 1 and 2; column 1, lines 24-27), the apparatus comprising :

a screen on the housing having a predetermined size for displaying information to a user (Fig.2, element 52);

handwriting recognition circuitry configured for recognizing single and multiple character words handwritten on the predetermined screen area (column 8, line 26);

a predetermined area of the screen less than the predetermined size of the screen on which handwriting is recognized (Fig.2), the predetermined area configured to display handwritten input; and

an input device which cooperates with the screen and underlying circuitry for use in inputting handwriting only in the predetermined screen area and selecting application operations displayed on the remainder of the screen to provide the input device with distinct functions based on where the device is used on the screen (Fig.2, element 38),

wherein the handwriting recognition circuitry is configured to display a plurality of recognition results on the screen simultaneously with the handwritten input (Fig.6a, item I).

As to claim 3, Capps discloses the apparatus of claim 1 wherein the handwriting recognition circuitry is configured to display a predetermined number of output words each having an underlying value associated therewith indicative of the probability of recognition accuracy thereof based on the input handwritten word, the output words

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being ordered from words having highest to least recognition accuracy probabilities (column 8, lines 60-64; column 9, lines 43-45).

As to claim 6, Capps discloses a handwriting recognition user interface (HUI) for a portable device having a touch-enabled input screen, said HUI comprising: a handwriting input area residing in a portion of a touch-enabled input screen (Fig.2), handwritten words being entered, one at a time using a stylus (Fig.2, element 38; Fig.4a), a plurality of recognition results being displayed in said handwritten input area (Fig.4b, 6a), simultaneously with at least one handwritten word (Fig.6a, item I); a recognition engine capable of recognizing handwritten words (fig.3, block 78); and a main dictionary (abstract, last to lines), said recognition engine comparing each handwritten input word against words in said main dictionary and providing a probability score indicative of the likelihood that each dictionary word is a correct interpretation of the handwritten input word (column 8, lines 60-64; column 9, lines 43-45).

As to claim 33, remarks analogous to those provided above for claims 1 and 3 are applicable.

As to claim 34, Capps further discloses the step of:

e) selecting one displayed word as a corresponding to said handwritten input (column 7, lines 58-65).

As to claim 35, Capps discloses that said handwriting recognition engine matches said entry against words in one or more dictionaries, each word in said one or more dictionaries being assigned a probability score indicative of a likelihood that

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said scored word is said entry (abstract, last two lines; column 8, lines 60-64; column 9, lines 43-45).

As to claim 48, remarks analogous to those provided above with respect to claims 1 and 33 are applicable. With regard to the computer program product, computer usable medium and computer readable program code, this is considered inherent in Capps' system, given that the system is essentially a hand-held computer. See also Fig.1.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 2, 4, 36-39 and 49-53 rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Capps and U.S. Patent 5,682,439 to Beernink et al. (hereinafter "Beernink").

With regard to claim 2, Capps discloses the apparatus of claim 1 wherein the handwriting recognition circuitry is configured to display a predetermined number of output words that are ordered by the circuitry based on likelihood of matching the input handwritten word (column 8, lines 58-64), the output words being displayed in a menu of word choices (Fig.6a).

Capps teaches that a user can selectively display the menu of output words (column 7, lines 58-61; column 8, lines 48-49). Since the words in the menu can be displayed at will, by choice of the user, Capps' invention can display the words in the menu each time a word is handwritten in the predetermined screen area.

If the claim were to be interpreted to mean that the words are displayed automatically for every word, this is considered obvious over Capps' disclosure, when considering the teachings of Beernink. Beernink teaches a pop-up corrector (e.g., Fig.5, element 168) similar to that provide by Capps. Beernink further teaches that a user can invoke the pop-up corrector using the stylus (column 10, lines 52-54) in manner similar to that of Capps, or it can be invoked automatically by the software itself (column 10, lines 54-58). Eliminating the need for user intervention in Capps' invention and providing it with the capability to display the words automatically offers the inherent

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advantage of assuring the user of more accurate word input, while alleviating the user from the tediousness of having to repetitively perform manual display of the words. It would therefore have been obvious to one of ordinary skill in the art to modify Capps' invention according to Beernink.

As to claim 4, Capps discloses that the output words include one word having the highest value amongst the displayed output words, but does not disclose a predetermined threshold recognition level that is compared to a confidence level for said one word such that if the confidence level exceeds the threshold recognition level the one word is used in the application that is active without requiring user intervention, and if the confidence level does not exceed the threshold recognition level user selection is required from amongst the output words for use in the active application. However, this is taught by Beernink (column 10, lines 56-61; note Beernink teaches that the correction list is invoked if the recognition probability does not exceed a predefined threshold, implying that the user would then need to make a selection). It would have been obvious to one of ordinary skill in the art to modify Capps according to Beernink because this would allow for the automatic invocation of the correction list, thereby relieving the user of having to manually invoke it.

As to 36, while Capps discloses confidence level and a pop-up list (see previous remarks), Capps does not disclose all of the the steps recited. However, Beernink discloses:

i) determining a confidence level for a highest scoring of said matched words, any said highest scoring word having a confidence level above a selected threshold

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level being identified as a word (column 10, lines 60-61; column 10, lines 13-14; column 10;

ii) inserting any identified primary word into an input buffer as a primary word choice (column 10, lines 15-16; in displaying the primary word, it is inherently inserted into a buffer); and

iii) inserting a plurality of remaining words in a pop-up list (column 10, lines 20-25).

It would have been obvious to one of ordinary skill in the art to implement Beernink's teaching in Capps because it would provide an improved interface for editing displayed words.

As to claim 37, Capps discloses that one of said words displayed in said pop-up list is selected and displayed in place of a previously recognized displayed word (column 10, lines 18-19).

As to claim 38, Capps further discloses the steps of:

f) selecting an action icon for editing previously displayed words (i.e., the keyboard icon, to the left of the label "66a" in Fig.2);

g) displaying a correction keyboard in said handwritten input area (Fig.8); and

h) editing words displayed in said other screen area, one or more characters of each edited word being replaced by characters entered from said correction keyboard (Figs. 10 and 12; column 10, lines 28-33).

As to claim 39, Capps discloses the step of:

j) storing an edited word in a dictionary responsive to selection of a key on said correction keyboard (Fig.12; abstract, last two lines). While Capps does not explicitly mention that the dictionary is a "user dictionary," the dictionary is effectively a user dictionary since it is used by a user.

With regard to claims 49-53, remarks analogous to those provided above with respect to claims 36-39 are applicable.

9. Claims 7-10, 12-13, 15-20, 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Capps and U.S. Patent 5,889,888 to Marianetti, II et al. (hereinafter "Marianetti").

With regard to claim 7, Capps discloses that said handwritten input area is located at a lower portion of said touch enabled screen in that the input area takes up a large portion of the screen, both the upper, middle and lower portions of the screen (Fig.2). If one were to interpret that claim to mean that the input area is located only at a lower portion of the screen, this is not taught by Capps. However, this is well known as evidenced by Marianetti (Fig.3). It would have been obvious to one of ordinary skill in the art to implement an input area that is located only at a lower portion of the screen as taught by Marianetti in order to conserve screen space, provide an input area that is closer to the user, and allow display of important information above the input area which does not interfere with the input of information.

As to claim 8, the handwritten input area taught by Marianetti appears to occupy less than one third of said touch-enabled screen, and spans said touch-enabled screen's width (e.g., Fig.5).

As to claim 9, Capps does not teach that the recognition engine is adapted to recognize handwritten entries made in cursive writing. However, the Examiner takes Official Notice that recognition engines which are adapted to recognize handwritten entries made in cursive writing are well known in the art. It would have been obvious to one of ordinary skill in the art to utilize such a recognition engine in Capps' invention because cursive writing is extremely common and a large portion of the population utilize and often prefer cursive.

As to claim 10, Capps discloses that the recognition engine is adapted to recognize printed handwritten entries (note Fig.4a).

As to claim 12, Capps discloses that the recognition engine is adapted to recognize stylus entries made in said handwritten input area as handwritten entries and stylus entries made outside of said handwritten input area as pointer function entries (in Fig.2, note that the lowest portion of the screen includes "soft buttons" on the screen which are activated by touch, i.e., pointing).

As to claim 13 A HUI as in claim 7 further comprising: a pop-up list of word choices, during word recognition a plurality of highest scoring words are identified as most likely word recognition results, one highest scoring result is designated a primary word choice and any remaining most likely word recognition results are designated secondary word choices (column 8, lines 60-64; column 9, lines 43-45; Fig.6a).

As to claim 15, Capps discloses a HUI as in claim 7 further comprising one or more action icons on said touch-enabled screen (Fig. 2, note icons at bottom of screen; Fig. 8, action icons are the keys in the keyboard)).

As to claim 16, Capps discloses a HUI as in claim 15 wherein said one or more action icons are displayed together on a side of said touch-enabled screen (note in Fig. 2, that the action icons "Names" and "Dates" are on the bottom left side of the screen; see also Fig. 8).

As to claim 17, Capps discloses a HUI as in claim 15 including software configured so that selecting one of said action icons selects an editing operation selected from the group consisting of: inserting a space, backspacing, deleting, capitalizing recognition result, and undoing automatic insertion of a last recognition result (note Fig. 8, "caps," backspace, and "del" keys).

As to claim 18, Capps does not explicitly disclose that said recognition engine is configured so that a stylus entry outside of said handwritten input area selects one or more characters of a previously entered word, whereby one or more characters of said previously entered word may be edited. However, the Examiner takes Official Notice that it is well known to use a stylus outside of a handwritten input area to select one or more characters of a previously entered word to edit the word is well known in the art. It would have been obvious to implement this in Capps' invention, as modified by Marianetti, because this would allow editing of displayed words, which is generally desirable by user of such devices.

As to claim 19, Capps discloses a HUI as in claim 18 further comprising a correction keyboard automatically being displayed upon selection of one or more of said action icons (note keyboard icon to the left of the label "66a", just above the icon for "Extras"; Fig.8).

As to claim 20, Capps discloses a HUI as in claim 19 wherein said correction keyboard is displayed in said handwritten input area (Fig.8). Note also that the particular location chosen for the keyboard is considered a decision based upon designer preference.

With regard to claim 22, Capps appears to disclose at least one configuration button icon (Fig.2), but the patent does not provide a description of the icons, and therefore does not disclose selecting said configuration button icon allowing the user to change configuration settings, said configuration settings comprising at least one of: selecting handwriting style; propose upper-case at the beginning of a word; propose punctuation at the end of a word; number of pop-up list recognition results; editing button icons location; and user dictionary maintenance. The Examiner takes Official Notice that configuration button icons are well known in the art, and at least one of the listed settings is also well known. It would have been obvious to one of ordinary skill in the art to provide a configuration button with at least one of the indicated configuration settings because it would allow improved usability.

With regard to claim 23, Capps teaches. A personal digital assistant (PDA) capable of recognizing handwritten words, said PDA (Fig.2; column 2, lines 12-14) comprising:

a touch-enabled input screen (Fig.2, element 52);

a recognition engine capable of recognizing handwritten words (column 2, lines 12-14);

a main dictionary containing a plurality of words (abstract, last two lines);

a communications port for communicating with a remotely connected computer, data being transferred between said remotely connected computer and said PDA (column 4, lines 63-68);

a local storage storing said main dictionary, application data and applications to be run on said PDA (inherent);

a plurality of switches providing manual input to said PDA (function buttons 64, in Fig.2; they function as switches); and

a handwriting recognition user interface (HUI). The HUI has been previously discussed with respect to claim 7. That discussion is applicable here. With regard to the limitation of "a plurality of recognition results being displayed...simultaneously with at least one handwritten word," this is has been previously discussed as being taught by Capps (Fig.6a, item I).

With regard to 24, see the remarks provided above for claims 7 and 8.

10. Claims 5, 40-43 and 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Capps and U.S. Patent 5,754,686 to Harada et al. (hereinafter "Harada").

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As to claim 5, Capps discloses the apparatus of claim 3 wherein the handwriting recognition circuitry includes at least one dictionary database and having a user interface therewith for inputting changes to the database (column 10, lines 51-56). Capps does not disclose that the inputting is based on low recognition values for handwritten words indicative of the absence of the words from the database. However, it is well known to input changes to a database based on low recognition values as evidenced by Harada (column 2, lines 1-13). It would have been obvious to modify Capps' invention according to Harada's teaching because this would allow new words, i.e., those not currently in the database, to be added to the database for subsequent recognition, effectively extending the flexibility of the invention.

As to claim 40, remarks provided elsewhere with regard to Capps are applicable. Capps also provides for an electronic device for running different applications (note various applications in Fig.2, at bottom of screen of device). The various claimed buffers and the operating system are considered inherent to Capps' device. Capps does not disclose a user-defined dictionaries (i.e., more than one). However, this is well known in the art as evidenced by Harada (column 6, lines 30-31). It would have been obvious to one of ordinary skill in to utilize plural user-defined dictionaries because it would allow for more accurate recognition for plural users, for example.

With regard to claim 41, the remarks provide for claims 9 and 10 are applicable. The method of claim 40 wherein the said handwritten data input can be in the style of cursive, print or a mixture of both.

As to claim 42, Capps further discloses that said word or character input can be formed from a character string comprised of one or more members from the group consisting of alphanumeric, punctuation, symbols and control characters (Fig.4a)

As to claim 43, Capps discloses editing and expanding the electronically stored dictionary (column 10, lines 51-56), which would include the user-defined dictionary according to Harada.

As to claim 45, Capps further discloses the step of selecting of the number of displayed probable recognition candidates by the user with the graphical interface (column 10, lines 18-19).

As to claim 46, Capps further discloses that the probable recognition candidates are displayed in a pop-up selection list, in rank order according to the values of their respective recognition probability indices (column 8, lines 58-64; column 9, lines 43-45).

As to claim 47, Capps disclose that the user-selected entry or recognition candidate is copied to the system buffer, deleting the previous entry where one exists, the content of the system buffer to be forwarded to the active application (column 10, lines 18-19).

11. Claims 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Capps, Harada and U.S. Patent 6,005,973 to Seybold et al. (hereinafter "Seybold").

As to claim 44, Capps does not explicitly disclose copying the recognition candidate with the highest probability to the system input buffer to be forwarded to the

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underlying active application without user input when said recognition candidate has a confidence level above a predetermined high threshold value. However, this is taught by Seybold (column 3, lines 20-21). The "buffer" is considered inherent. It would have been obvious to utilize a threshold as taught by Seybold because it would allow a determination of whether a word is present in the dictionary or not.

12. Claims 11, 21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Capps, Marianetti and Harada.

As to claim 11, Capps teaches, as previously discussed, matching handwritten words against a dictionary and assigning a probability score. The patent does not disclose a user dictionary supplementing said main dictionary, words in said user dictionary being matched against said each handwritten input word and assigned a probability score. However, the use of a user dictionary to supplement a main dictionary is well known in the art as evidenced by Harada (e.g., Fig.26, elements 106 and 107). It would have been obvious to one of ordinary skill in the art to utilize a user dictionary in Capps' because this would allow for more efficient use of the system, alleviating the need to make the main dictionary excessively large to accommodate new words.

With regard to claim 25, the discussion provide above for claim 11 is applicable.

As to claim 21, Capps discloses that said correction keyboard includes an add corrected word key, selecting said add corrected key adding an edited word to a user dictionary (Fig.11; Fig.12). Capps does not disclose said user dictionary supplementing

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said main dictionary. However, this is well known in the art. Reference is made to the remarks provided above with regard to claim 11.

13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Capps, Marianetti and Seybold.

As to claim 14, Capps does not disclose that the recognition engine is adapted to define a predetermined threshold confidence level so that when said primary word choice has a confidence level above said predetermined threshold, said primary word is automatically loaded into an input buffer for delivery to an active application. However, this is taught by Seybold (column 3, lines 20-21). The "buffer" is considered inherent. It would have been obvious to utilize a threshold as taught by Seybold because it would allow a determination of whether a word is present in the dictionary or not.

14. Claims 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Capps, Mariannetti, Harada and Seybold.

With regard to 26, the discussion provided above for claim 14 is applicable.

As to claim 27, Capps discloses that said communications port is a wireless communications port (an I/R port, column 4, lines 63-68, is wireless). The patent does not disclose that e-mail messages are communicated over said wireless communications port. However, the Examiner takes Official Notice that communicating email messages over a wireless communications port is well known in the art. It would

have been obvious to one of ordinary skill in the art to provide the capability of communicating email messages over the wireless communications port because this would allow more convenience to the user for accessing email.

As to claim 28, see the discussion above for claim 17.

As to claim 29, Capps discloses that a stylus entry at a previously entered displayed word is recognized as selecting one or more characters (all of the characters) of said previously entered displayed word, whereby one or more characters of said selected characters may be edited (column 7, lines 58-61).

As to claim 30, Capps is silent with regard to an expansion port capable of receiving an expansion keyboard, whereby characters may be entered to correct entered words through a keyboard attached to said expansion port. The Examiner takes Official Notice that expansion ports capable of receiving an expansion keyboard are well known in the art. It would have been obvious to one of ordinary skill in the art to provide such a port and keyboard to Capps' invention because this would allow a convenient means for rapid data input.

As to claim 31, the discussions provided above for claims 19 and 20 are applicable.

As to claim 32, Capps discloses that said correction keyboard includes an add corrected word key, selecting said add corrected key adding an edited word to a user dictionary (Fig.11; Fig.12). Capps does not disclose said user dictionary supplementing said main dictionary. However, the use of a user dictionary to supplement a main dictionary is well known in the art as evidenced by Harada (e.g., Fig.26, elements 106

and 107). It would have been obvious to one of ordinary skill in the art to utilize a user dictionary in Capps' because this would allow for more efficient use of the system, alleviating the need to make the main dictionary excessively large to accommodate new words.

References Cited

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 4,972,496 to Sklarew teaches a handwritten keyboardless entry computer system which simultaneously displays handwritten input and a plurality of recognition results (Fig.11D).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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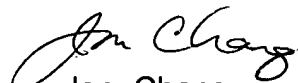
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Chang whose telephone number is (703)305-8439. The examiner can normally be reached on M-F 8:00 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.


Jon Chang
Primary Examiner
Art Unit 2623

Jon Chang
March 17, 2003